This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for neutralizing a mine or unexploded ordnance comprising explosive in a casing, said method comprising:

(a) reacting a compound that undergoes a self propagating high temperature synthesis (SHS) reaction to form high temperature reaction products in quantity and at a rate sufficient to disrupt and perforate the casing, wherein the reaction products are mostly liquid;

(b) causing the high temperature reaction products to disrupt and perforate the casing at a plurality of locations sufficient to create a reaction front that converges on the casing and thereafter ignites the explosive;

(c) limiting the spread of the liquid high temperature reaction products;

(d) supplying an oxygen-rich gas stream to the casing or explosive material to enhance disruption of the casing or burning or decomposition of the explosive material; and

(e) burning or decomposing the explosive for a time sufficient to destroy the explosive;

wherein the reactive compound is selected from the group consisting of (i) an essentially stoichiometric combination of sulfur and a metal ~~selected from the group consisting of zirconium, chromium, indium, titanium, manganese, iron, and blends thereof~~ that undergoes an SHS reaction with sulfur to form a chalcogenide and (ii) an essentially stoichiometric combination of carbon and a metal selected from the group consisting of hafnium, zirconium, titanium, silicon, and blends thereof; and

wherein the reactive compound consists essentially of particles having particle size less than about 100 microns.

2. (original) The method of claim 1 wherein the mine of unexploded ordnance is at least partially immersed in water.

3. (previously amended) The method of claim 1 wherein the mine or unexploded ordnance at least partially contacts an overburden comprising ground or debris, said method further comprising removing at least a part of the overburden from the mine or unexploded ordnance by a release of gas.

4. (original) The method of claim 1, wherein the reactive compound consists essentially of particles having particle size less than about 1 micron.

5. (original) The method of claim 1, wherein the mine or unexploded ordnance further comprises propellant, and the propellant also is burned or decomposed.

6. (currently amended) A method for neutralizing a mine or unexploded ordnance having a casing comprising explosive material, said method comprising:

(f) reacting a compound that undergoes a self propagating high temperature synthesis (SHS) reaction to form high temperature reaction products in quantity and at a rate sufficient to decompose the explosive material, wherein the reaction products are mostly liquid;

(g) limiting the spread of the liquid high temperature reaction products;

(h) supplying an oxygen-rich gas stream to the casing or to the explosive material to enhance decomposition of the casing or burning or decomposition of the explosive material; and

(i) decomposing the explosive material by heating the casing with the high temperature reaction products for a time and at a rate sufficient to increase the pressure in the casing to cause the casing to fracture and, before the explosive material detonates, to (i) scatter the explosive material or (ii) burn or decompose the explosive material for a time sufficient to destroy the explosive material;

wherein the reactive compound is selected from the group consisting of (i) an essentially stoichiometric combination of sulfur and a metal ~~selected from the group consisting of zirconium, chromium, indium, titanium, manganese, iron, and blends thereof~~ that undergoes an SHS reaction with sulfur to form a chalcogenide and (ii) an essentially stoichiometric combination of carbon and a metal selected from the group consisting of hafnium, zirconium, titanium, silicon, and blends thereof; and

wherein the reactive compound consists essentially of particles having particle size less than about 100 microns.

7. (original) The method of claim 6 wherein the reactive compound consists essentially of particles having particle size less than about 1 micron.